

### ABSTRACT

An exhalation valve assembly for a respirator, said assembly comprising an upstream one-way flap valve and a downstream one-way flap valve, both mounted within a housing. The valves are spaced apart to define therebetween a volume which acts as a 'dead space' in which a portion of the just-exhaled air will rest so that, should the upstream valve leak for any reason, any leakage air drawn back into the respirator will be taken from this just-exhaled air, and will thus not be contaminated by the ambient air.